FEASIBILITY STUDY

US 13 BYPASS
From Ahoskie Bypass to Winton Bypass
Hertford County
R-2205

Prepared by
Planning and Research Branch
Division of Highways
N. C. Department of Transportation

May, 1987

US 13, Hertford County
Feasibility Study

I. LOCATION AND TYPE OF FACILITY

The section of US 13 covered in this study begins at the Ahoskie Bypass and terminates at the Winton Bypass. This section of US 13 is 2.7 miles in length and it lies entirely within Hertford County (See Figure 1). The existing pavement is 24 feet wide with 4-foot paved shoulders.

US 13 is classified as a minor arterial in the North Carolina Functional Classification System.

II. SUMMARY OF NEEDED IMPROVEMENTS

The purpose of this study was to evaluate the feasibility of relocating the subject section of US 13. The results of this study reveal that it would be feasible and desirable to relocate US 13 with a two-lane facility on four-lane right of way. The right of way width will allow for the construction of a four-lane, divided facility if it is deemed necessary in the future.

The recommended improvements are to improve traffic flow between Ahoskie and Winton.

III. EXISTING CONDITIONS

A. General

The subject section of US 13 is located in Hertford County. The section covered in this study begins at the Ahoskie Bypass and terminates at the Winton Bypass. Both the Ahoskie and Winton Bypasses were constructed with provisions for the future extension of US 13 on new location.

US 13 is a two-lane facility throughout the studied area. The studied section has a 55 mph posted speed limit. The pavement condition is judged generally good. There is one 3-degree and one 5-degree curve along this section of US 13. Approximately 73% of the segment has unrestricted passing sight distance of 1500 feet or more.

Flat terrain exist along the subject section of US 13. The vertical and horizontal alignments are judged to be good.

B. Traffic Volumes and Capacity Analysis

Current (1987) average daily traffic (ADT) volumes range from a low of 5,200 vpd to a high of 6,000 vpd. Approximately 5-percent of these vehicles are truck tractor semitrailers (TTST) and 4 percent dual-tired trucks (DTT). The future ADT along this section is estimated to range

from a low of 8,500 to a high of 9,800 vehicles per day in the year 2007 (See Figure 2).

An analysis of the subject section of US 13 indicates that the facility is currently operating in the Level-of-Service C range during daily peak travel periods. Based on traffic projections, the subject section of US 13 will be operating in the Level-of-Service D range by the end of the 20 year planning period.

C. Characteristics of Development

The density of development along the subject section of US 13 is moderate and rural-residential in nature.

D. Accident Study

An accident study of the subject location was conducted by the Traffic Engineering Branch of the North Carolina Department of Transportation from January 1, 1984 to January 31, 1987. Summarized accident statistics are as follows:

	US 13 From Ahoskie Bypass to Winton Bypass	Statewide Average for Similar Primary Routes (1986)
Total Accidents	58.00	N/A
Fatal Accident	1.00	N/A
Non-Fatal Injury Accidents	29.00	N/A
Total Accident Rate	251.00	191.90
Fatal Accident Rate	4.34	4.00
Non-Fatal Injury Accident Rate	125.98	91.70

No particular accident patterns stands out; however, the studied section is the remaining unimproved section between the Winton and Ahoskie Bypasses and this may in general be the reason that the total accident rate is higher that the statewide averages.

E. Structures

There are no structures located within the project limits.

IV. STUDIED IMPROVEMENTS

Improvements to US 13 should be constructed on new location (See Figure 1). Relocation is recommended to provide compatibility with the existing terminal facilities and to avoid disruption to moderate roadside development. Widening the existing roadway is not practical.

The following is recommended for the new location of US 13:

1. Length:
   Construction 2.7 miles

2. Cross Section: 24' pavement, 12' useable shoulders, (2' paved)

3. Right of Way: Approximately 350' with full control of access (Adequate right of way is proposed for a future four lane divided highway with a 46' median).

4. Intersection Treatment - Initial at-grade intersections with future Treatment as follows:

   a) US 13 (South) - future grade separation
   b) SR 1408 and SR 1409 - future termination
   c) US 13 (North) - future diamond type interchange

5. Estimated Cost:

Construction		$ 2,350,000
Right of Way		$ 880,000
	TOTAL	$ 3,230,000

V. POSSIBLE ENVIRONMENTAL IMPACTS

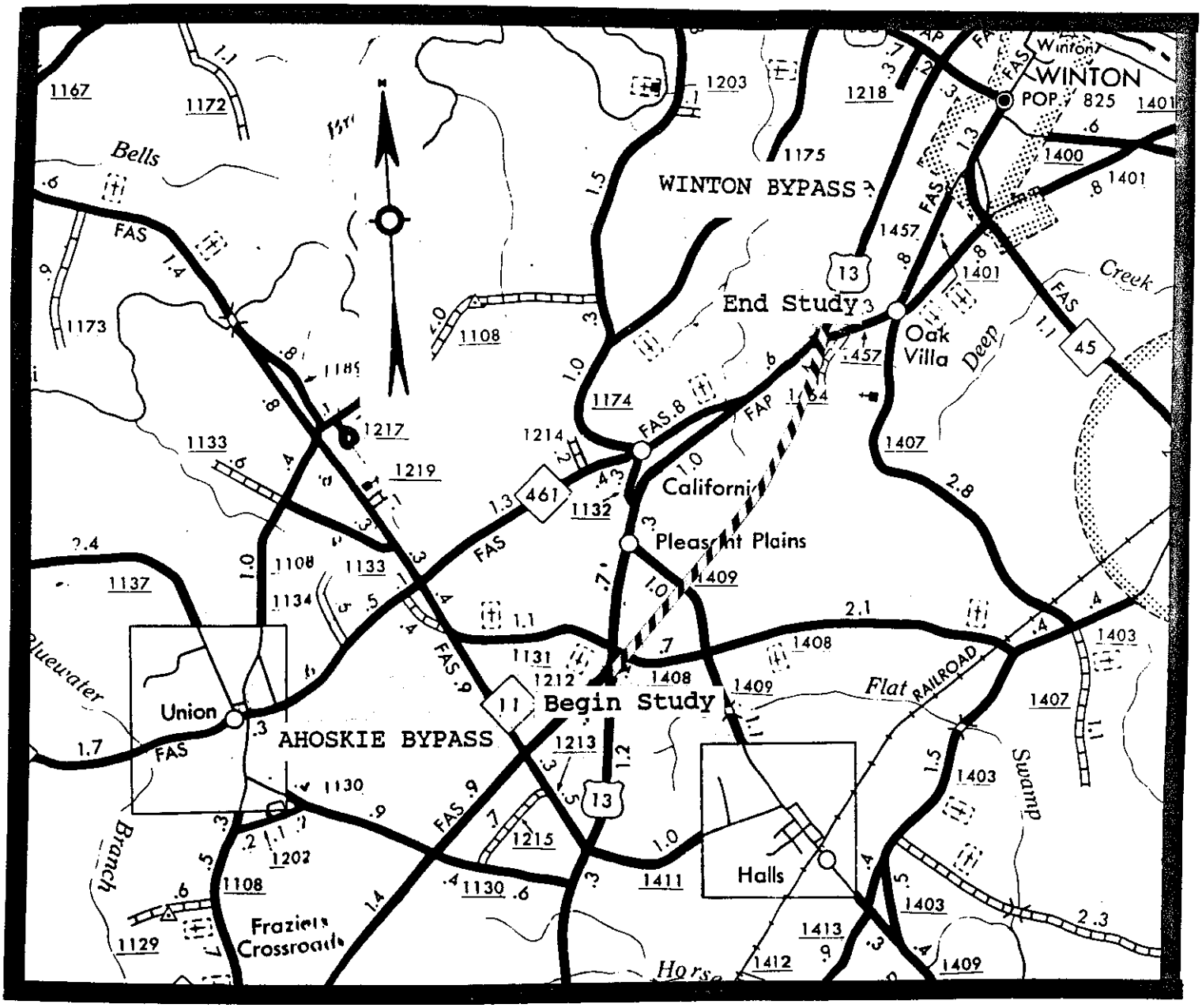
The potential environmental concern on the subject project would be the impact upon wetlands. Any other possible environmental impacts of constructing the proposed improvements are not concerned of major consequence.

VI. BASIS FOR FINDINGS

The recommendations contained in this document were based on the following:

1. Field investigation
2. Correspondence with the Division Engineer
3. Previous studies on Winton and Ahoskie Bypasses
4. Aerial Photography dated 4-12-87
5. Cost estimates provided by the Right of Way Branch and Roadway Design Service

JLS/sdt



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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US 13 BYPASS From Ahoskie Bypass To Winton Bypass

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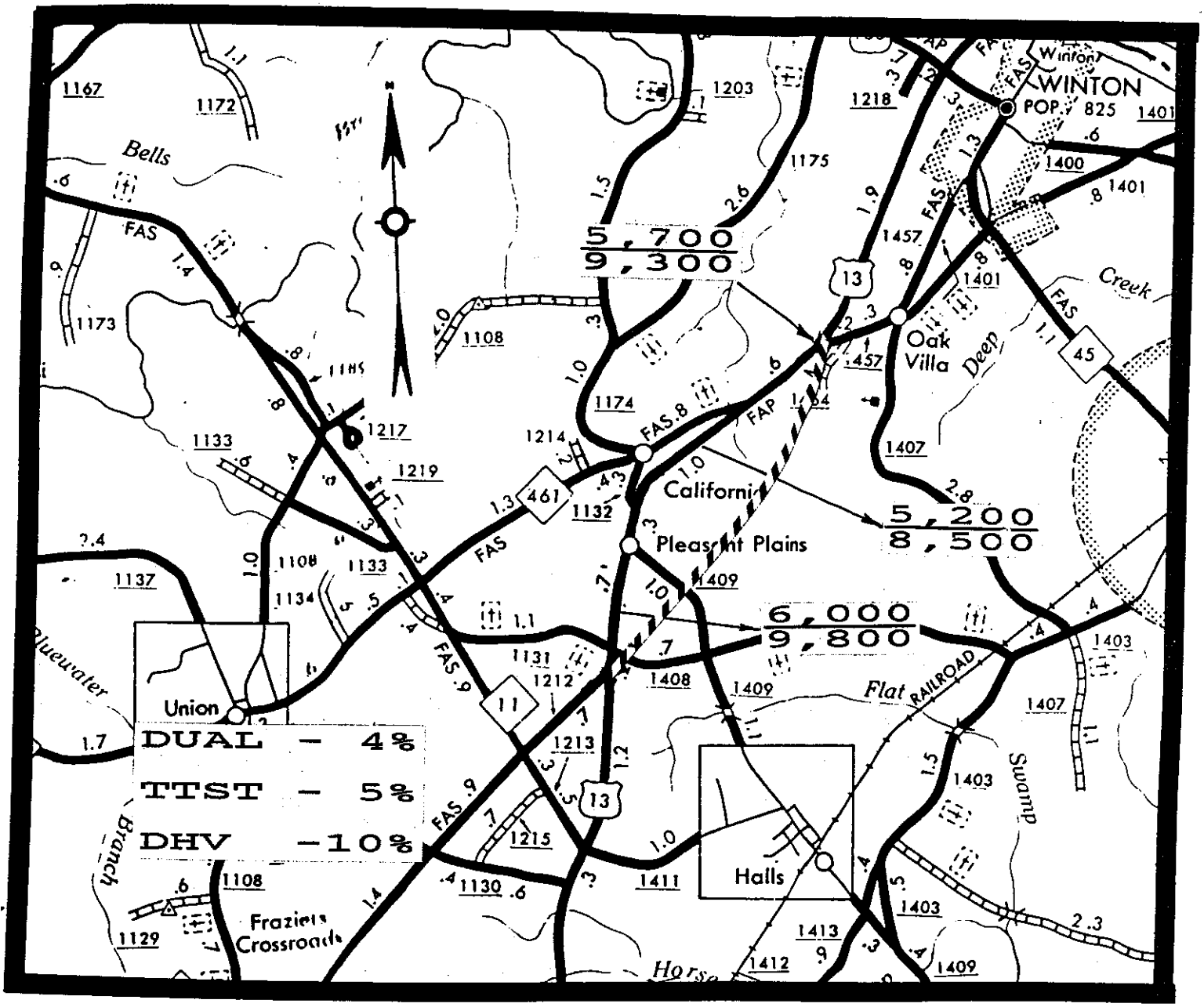
5/87	1' = 1 MILE	FIG. 1

1987/2007 ADT ESTIMATES



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5/87	1' = 1 MILE	FIG. 2